

Ketamine Non-Medical Use versus Medical Use in the United States' General Population

Krause A; Czizik A, MS; Black J, PhD¹; Dart R, MD, PhD¹; Iwanicki J, MD

¹Rocky Mountain Poison & Drug Safety - Denver Health, CO

Introduction

Ketamine is used medically to treat pain and depression but also used non-medically (NMU) due to its dissociative and hallucinogenic properties. This study aims to describe medical versus non-medical use of ketamine in the U.S. through evaluating its wide range of users.

Methods

- The Survey of Non-Medical Use of Prescription Drugs Program (NMURx) is a repeated cross-sectional online survey of adults in the U.S. which provides estimates of the non-medical use of prescription drug classes and non-pharmaceutical drugs.
- A total of 29,845 respondents were surveyed in 3rd quarter 2021, and calibration weighting was utilized to represent the general population of adults.
- Non-medical use (NMU) of ketamine was defined as use of pharmaceutical forms in a way not directed by a healthcare professional or any use of a non-pharmaceutical form.
- Prevalence of ketamine use as intended vs NMU, demographics, and other drug-use was assessed.
- The Drug Abuse Screening Test (DAST-10) is a 10-item brief screening tool used to assess drug use, not including alcohol or tobacco use, in the past 12 months. DAST-10 score degree of problems related to drug abuse; 1-2 (Low), 3-5 (Moderate), 6-8 (Substantial), 9-10 (Severe) were assessed.

Demographics of Ketamine Use

%	Never	Medical	Non-Medical
Gender (Male)	48.2	51.6	66.7
Race (White)	75.3	74.2	81.6
Student (Yes)	7.6	16.5	13.2
Healthcare Professional (Yes)	5.9	8.6	12.4
Veteran (Yes)	8.7	9.0	11.2
Tobacco Use (Some or Every Day)	11.7	27.4	40.0
Cannabis Use (Yes)	47.9	64.2	78.4
Alcohol Use (+7 drinks per week)	19.1	25.2	32.9
Employment Status (Yes)	43.7	46.2	50.0
Education Status (Bachelor's or Higher)	14.9	16.6	17.2
Private Health Insurance (Yes)	61.1	57.6	54.1
DAST-10 Category (Moderate or Greater)	5.0	18.2	43.4

Results

- The estimated prevalence of any lifetime use of ketamine was 3.4% (95% CI: 3.2 – 3.7), representing 8,851,120 U.S. adults.
- A total of 2% (1.9 – 2.2) of the U.S. population has used ketamine non-medically in their lifetime; a total of 1.4% (1.3-1.6) only ever used medically as intended.
- Mean DAST-10 scores for adults who only used medically as intended was 1.4 (95% CI: 1.2 – 1.6) and 3.0 (2.7 – 3.2) for non-medical users.
- Adults who non-medically used ketamine were primarily white (81.6%), male (66.7%), used cigarettes (40.0%), used cannabis (78.4%), or heavily drank alcohol (32.9%) in their lifetime.
- Among adults who non-medically used, notable percentages were healthcare professionals (12.4%), veterans (11.2%), unemployed (50.0%), or students (13.2%).

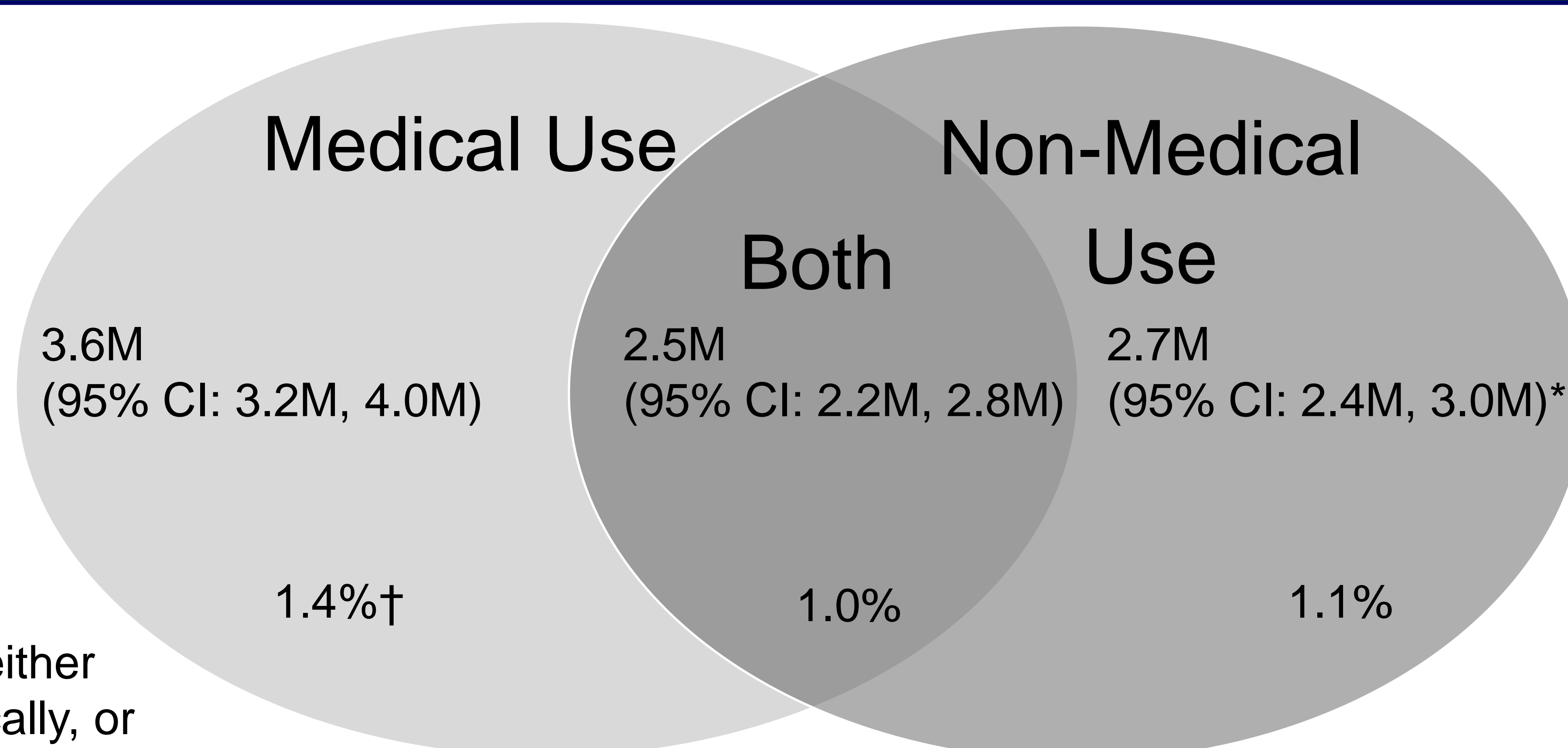
Conclusions

NMU of pharmaceutical or use of non-pharmaceutical ketamine in the U.S. accounts for most of the lifetime use of the drug. Adults who NMU have more serious substance use profiles than those who use as intended, exposing them to other risks.

Strengths & Limitations

- NMURx is weighted for national representativeness
- Careless response is considered in the exclusion criteria
- Survey is only in English and Spanish languages
- Self-report survey methodology introduces potential for misclassification biases
- Data is limited to adults in the United States who utilize the internet and excludes anyone who does not fit into those categories

Lifetime Ketamine Use



*Weighted frequencies and 95% confidence intervals represent the U.S. 2021 population.

† Percent of the U.S. Population that has either medically, non-medically, or both used ketamine.